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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/597,139

07/12/2006

Scott David Keniston

50002/40625

6558

57726 7590 11/18/2008
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EXAMINER

HUTCHINS, CATHLEEN R

ART UNIT

PAPER NUMBER

3672

MAIL DATE

DELIVERY MODE

11/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/597,139	Applicant(s) KENISTON ET AL.	
	Examiner CATHLEEN R. HUTCHINS	Art Unit 3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because no corrected drawings were received with the reply, even though amended drawings were indicated in the remarks dated 9/10/2008. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Dowell, et al. US5899958.

Dowell, et al. teaches a method and apparatus for feeding a survey tool 200 into a borehole 20 on the end of a drill string 80 as part of a drilling operation Figure 10, activating the survey tool once drilling is complete, taking position readings column 4: 63-65 using inertial survey packages column 5: 47-59 (where accelerometers are inertial survey instruments) as the string is withdrawn/ tripped from the hole column 4: 43-46 using a data logger 150.

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Claims 5-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Bell, US3791042.

Bell teaches an apparatus for surveying drill holes 26, capable of surveying holes using a method incorporating the steps of feeding a survey tool into a borehole on the end of a drill string as part of the hole drilling operation, activating the survey tool once drilling is completed, and taking position readings from the survey tool as the drill string is withdrawn from the hole, capable of performing these methods, wherein the survey tool includes an inertial survey package 26, a power source battery described in column 4: 65, a data logger 73, and 16, the tool is mounted to the drill string by a damping system 130, wherein the cross hatching indicates a rubber material which is an inherent damper for vibration, arranged to isolate the survey tool from vibration and acceleration induced in the drill string. The inertial survey package is selected from commercially known packages for superior resistance to vibration and impact when in a sleeping mode wherein the package shown is known in the art, and resists vibration and impact from 130.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2 -4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dowell, et al. in view of Angehrn US4047430.

Dowell, et al. teaches all of the elements of claim 1, but does not teach that the survey tool is maintained in a sleep mode while drilling and is able to sense the cessation of drilling to activate the tool, or that position readings are temporarily halted for removal of each drill rod. Angehrn teaches logging while withdrawing the drill string from the formation so that the instruments are held in the sleep/ de-energized mode column 7: 11-13 while being fed downhole, and is activated ("ON" position) when the pipe is removed column 7: 19-24 such that when the pipe sections are removed, the measuring is paused ("STANDBY" position) column 7: 30-38. Removal of the drill string indicates that drilling has ceased, and is sensed by accelerometers column 8: 30-39. It would have been obvious to a person having ordinary skill in the art at the time of the instant invention to modify Dowell, et al. in view of Angehrn to keep the tool in a sleep mode while drilling to conserve energy, to energize once drilling has been completed by sensing when drilling has stopped as indicated by upward motion

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such that accurate measurements may be taken, and to temporarily return to a sleep mode (thus temporarily halting position readings) when disconnecting drill strings to further conserve energy.

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dowell, et al. in view of Bell.

Dowell, et al. teaches all of the elements of claim 5, but does not specifically recite an inertial survey tool selected from commercially known survey packages based on its resistance to vibration and impact due to being mounted to the drill string by a damping system, particularly when in the sleeping mode. Bell teaches using a damping system, as discussed above, to hold the surveying tool. It would have been obvious to a person having ordinary skill in the art at the time of the instant invention to modify Dowell, et al. in view of Bell to use a dampened system, particularly when in the sleep mode, to prevent damage to the survey tool from vibration and acceleration due to running downhole or drilling.

Response to Arguments

Applicant's arguments, see remarks, filed 9/10/2008, with respect to the rejection(s) of claim(s) 1 and 4 under Ho US5044198 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Dowell, et al.

Applicant's arguments filed 9/10/2008 have been fully considered but they are not persuasive. Regarding applicant's arguments against the Bell rejection, the

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examiner refutes these arguments. The apparatus claim requires an apparatus capable of surveying drill holes while being withdrawn from the borehole. Bell is clearly capable of doing so, since the apparatus is selectively activated due to the cessation of rotation of the bit as described in column 4: 45-49, for which upward or downward movement would not affect the activation of the switch 13 that activates the system. Regarding applicant's arguments against the rejection of claim 7, the examiner refutes this. Rubber is a material that inherently absorbs shock from vibration or acceleration. The drawings indicate a rubber cross section, thus a damping system is provided. Additionally, while applicant argues the structure of the damping system described in the specification, no such structure is required in the claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CATHLEEN R. HUTCHINS whose telephone number is (571)270-3651. The examiner can normally be reached on Mon thru Thurs 7:30-5, alternate Fri 7:30-4 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David J. Bagnell/
Supervisory Patent Examiner, Art Unit 3672

/CRH/
11/10/2008